PATENT
Attorney Docket No.: 414130

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Wayne Edward Beimesch	Confirmation No.: 9670
Serial No. 10/724,564	Examiner: David A. Rogers
Filed: November 26, 2003	Group Art Unit: 2856
For: METHOD FOR MEASURING VOLATILE ORGANIC COMPOUNDS AND A KIT FOR SAME	Attorney Docket No.: 414130

July 1, 2008

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Commissioner For Patents
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APPEAL BRIEF

Sir:

In accordance with 37 C.F.R. §41.37, and fully responsive to the Office Action dated February 14, 2008, Appellant hereby files the Appeal Brief in support of the Appeal in the above-identified matter (hereinafter the '564 Application). A Notice of Appeal, with the appropriate small entity fee of $255 as required by 37 C.F.R. §§41.31, 41.20(b)(1), was filed on May 14, 2008. The small entity fee of $255 for this appeal brief, as required by 37 C.F.R. §41.20(b)(2), is also filed herewith. This Appeal Brief is being filed within 2 months of the mailing of the Notice of Appeal, and no extension of time is necessary pursuant to 37 C.F.R. §§ 1.136(a) and (b).

(1) Real party in interest.

The real party in interest for this appeal is Midwest Research Institute. The '564 application is a divisional application of the U.S. Patent Application 09/806,274, which has been assigned to Midwest Research Institute. Evidence of this assignment, which was recorded on March 27, 2001, may be found at reel/frame 012337/0269.

(2) Related appeals and interferences.

The '564 application is a divisional application of the U.S. Patent Application 09/806,274, which is currently under appeal before the Board of Patent Appeals and Interferences. No other pending appeals or interferences are currently known to Appellant that will directly affect, be directly affected by, or have a bearing on the decision to be rendered by the Board of Patent Appeals and Interferences in the instant appeal.

(3) Status of claims.

Claims 23-34 are pending and were rejected in the last Office Action dated February 14, 2008 and are at issue in this appeal. Claims 1-22 and 35-36 have been previously cancelled. Claims 23-34 stand rejected as follows:

(a) Claims 23-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,930,906 to Hemphill. Appellant respectfully traverses this rejection and requests withdrawal of the same.

(4) Status of amendments.

The '564 Application was filed on November 26, 2003 as a divisional application of the U.S. Patent Application 09/806,274, with claims 11-31. A first office action was mailed on July 28, 2004 rejecting all pending claims 11-31, to which a response was filed with amendments to Claims 24 and 25 on November 29, 2004. On March 11, 2005, a final office action was mailed rejecting all pending claims 11-31. A Request for Continued Examination (RCE) was filed on September 12, 2005. A non-final Office Action was mailed on September 28, 2005 again rejecting all claims 11-31. A response was filed with new claims 32-36 on March 28, 2006. On May 30, 2006, a non-final office action was mailed rejecting all pending claims 11-36. Another non-final office action was mailed rejecting all pending claims 11-36 on June 22, 2006 before Applicant responded to the Office Action dated May 30, 2006. A response was filed on December 22, 2006, canceling claims 11-22, and 35-36. On January 23, 2007, a final office action was mailed rejecting all pending claims 23-34, to which an RCE response was filed on May 16, 2007, with amendments to claims 23-25 and 32. On May 25, 2007, a final office action was mailed again rejecting all pending claims 23-34. Another RCE response was filed on September 18, 2007, with amendments to claims 23-25 and 32-34. On October 9, 2007, a non-final office action was mailed again rejecting all pending claims 23-34. Another response was filed on January 7, 2008. On February 14, 2008, a final office action was mailed again rejecting all pending claims 23-34 and prompting this appeal. A Notice of Appeal was filed on May 14, 2008. Claims 23-34 are currently pending, of which Claims 26-31 are original (without claim amendment during prosecution). Claims

23-25, 32-34 have been amended and/or added during the course of prosecution. Claims 11-22 have been previously cancelled.

(5) Summary of claimed subject matter.

Claims 23-34 are directed to a kit for measuring volatile organic compounds in a process system having emissions. Claims 23, 24, 25 and 32 are the only independent claims in the application.

Claim 23 recites a kit comprising an enclosed collapsible bag having a sealable opening to allow an amount of a substance to be placed in said enclosed bag such that there is headspace above said substance, and instructions for analyzing samples from said headspace in said enclosed bag, thereby providing readings of the volatile organic compounds (VOCs) from said substance. Claim 23 further recites that the enclosed bag is formed by materials that do not release significant amounts of volatile organic compounds (VOCs).

Referring to the Specification as originally filed, lines 3-10 on page 2 describe a method for placing a substance in an enclosed bag and storing the bag with the substance at the mean exit temperature until the contents in the bag reach equilibrium. After equilibrium has been reached, the content in the headspace of the bag may be analyzed with a flam ionization detector. Lines 5-7 on page 2 discusses that the bag may have a sealable opening and there is a headspace after the substance is placed in the bag. Lines 9-15 on page 5 disclose a kit containing a bag and instructions for practicing the method described above, and the last line on page 3 continuing onto line 1 on page 4 of the Specification teach that the bag does not contribute to the VOC measurement.

Claim 24 recites a kit comprising an enclosed collapsible bag having a sealable opening to allow an amount of a substance from a process system to be placed in the enclosed bag such that there is headspace above said substance, and instructions for placing said enclosed bag at the exit temperature of said process system until an equilibrium has been reached between the substance and the headspace and analyzing samples from said headspace, thereby providing levels of volatile organic compounds

from said substance. Claim 24 further recites that the enclosed bag is formed by materials that can be safely stored at the exit temperature of said process system.

Referring to the Specification as originally filed, lines 3-10 on page 2 describe a method for placing a substance in an enclosed bag and storing the bag with the substance at the mean exit temperature until the contents in the bag reach equilibrium. After equilibrium has been reached, the content in the headspace of the bag may be analyzed with a flam ionization detector. Lines 5-7 on page 2 discusses that the bag may have a sealable opening and there is a headspace after the substance is placed in the bag. Lines 9-15 on page 5 disclose a kit containing a bag and instructions for practicing the method described above, and lines 30-32 on page 3 of the Specification requires that the bag can be safely stored at the exit temperature of said process system.

Claim 25 recites a kit comprising an enclosed collapsible bag having a sealable opening to allow an amount of a substance from a process system to be placed in the enclosed bag such that there is headspace above said substance, and instructions for analyzing samples from said headspace, thereby providing levels of volatile organic compounds released by said substance. Claim 25 further recites that the enclosed bag has a wall consisting of two layers, wherein the inside layer is vapor impermeable and the outside layer is made of polymer.

Referring to the Specification as originally filed, lines 3-10 on page 2 describe a method for placing a substance in an enclosed bag and storing the bag with the substance at the mean exit temperature until the contents in the bag reach equilibrium. After equilibrium has been reached, the content in the headspace of the bag may be analyzed with a flam ionization detector. Lines 5-7 on page 2 discusses that the bag may have a sealable opening and there is a headspace after the substance is placed in the bag. Lines 9-15 on page 5 disclose a kit containing a bag and instructions for practicing the method described above, and the last paragraph of page 3 teaches that the wall of the bag can be constructed such that the wall consists of two layers with a vapor impermeable inner layer and a outer layer that is made of polymer.

Claim 32 recites a kit comprising an enclosed collapsible bag having a sealable opening to allow an amount of a material from a process system to be placed in the enclosed bag such that there is headspace above said material, and instructions for

analyzing samples from said headspace, thereby providing levels of volatile organic compounds released by said material. Claim 32 further recites that the enclosed bag has a wall consisting of an inner liner and an outer liner, wherein the inner liner and the outer liner do not release significant amounts of VOCs.

Referring to the Specification as originally filed, lines 3-10 on page 2 describe a method for placing a substance in an enclosed bag and storing the bag with the substance at the mean exit temperature until the contents in the bag reach equilibrium. After equilibrium has been reached, the content in the headspace of the bag may be analyzed with a flam ionization detector. Lines 5-7 on page 2 discusses that the bag may have a sealable opening and there is a headspace after the substance is placed in the bag. The last line on page 3 continuing onto line 1 on page 4 of the Specification teaches that the bag does not contribute to the VOC measurement, implying that neither the inner nor outer layer releases significant amounts of VOCs.

(6) Grounds for rejections to be reviewed on appeal.

Whether Claims 23-34 are obvious under 35 U.S.C. § 103(a) over U.S. Patent 4,930,906 to Hemphill.

(7) Arguments.

Claims 23-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 4,930,906 to Hemphill ("Hemphill" hereinafter). Appellant respectfully traverses the rejection because Hemphill does not teach or suggest Appellant's invention as claimed and it would not have been obvious for one of ordinary skill in the art to modify the teachings of Hemphill in order to arrive at Appellant's invention. Appellant respectfully requests that the Board reverse the Examiner's rejections of all pending claims.

The following is provided and applies to the discussion of all rejections under 35 U.S.C. § 103:

Obviousness is a question of law based on underlying factual inquiries. The factual inquiries (also known as the "Graham factual inquiries") to be performed by the Examiner are as follows:

(1) Determining the scope and content of the prior art;
(2) Ascertaining the differences between the claimed invention and the prior art; and
(3) Resolving the level of ordinary skill in the pertinent art.

Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc., Federal Register, Vol. 72, No. 195, 57526-35, 57526 (October 10, 2007) (the "Guidelines" hereinafter). Once the Graham factual inquiries are resolved, the Examiner must determine whether the claimed invention would have been obvious to one of ordinary skill in the art. Prior art is not limited just to the references being applied, but includes the understanding of one of ordinary skill in the art. Although the prior art reference (or references when combined) need not teach or suggest all the claim limitations, the Examiner must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art. *Id.* at 57528.

The Supreme Court noted in the *KSR* case that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Court stated that "'rejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be

some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'" *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 at 1741, 82 USPQ2d 1385 at 1396 (2007), quoting *In re Kahn*, 441 F.3d 977, 988 (C.A.Fed.2006).

The Guidelines provide, by way of example, a number of rationales that may be used in rejections under obviousness:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) ''Obvious to try''—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

The Guidelines, at 57529.

Appellant respectfully submits that the claimed invention is not obvious over the prior art because significant differences exist between the claimed invention and the prior art and that these differences are such that the claimed invention as a whole would not have been obvious to a person having ordinary skill in the art at the time the invention was made.

Claim 23

Claim 23 is directed to a kit for measuring volatile organic compounds (VOCs) released by a substance produced in a process system having emissions. The kit of Claim 23 comprises a bag and instructions on how to use the bag to measure VOCs released by the substance of interest. The bag of Claim 23 is formed by materials that do not release significant amounts of VOCs.

The bag disclosed in Hemphill is "formed with a multiply construction and having an internal layer of a heavy gage deformable aluminum foil, an intermediate layer formed by a puncture resistant polyethylene sheet, and an outer layer formed by an insulating paper material." Hemphill, lines 62, Col. 1 to line 1, Col. 2. There is no teaching or suggestion in Hemphill that the bag is formed by materials that do not release significant amounts of VOCs.

The Examiner reasoned that because Appellant's bag is made of an aluminum and a polyethylene layers, the aluminum and polyethylene layers taught in Hemphill also do not release significant amounts of VOCs. This line of reasoning ignores the fact that chemical processes are highly variable and unpredictable. As a result, chemical materials such as aluminum and polyethylene can be highly variable in terms of their physical and/or chemical property. There is no teaching in Hemphill that the aluminum and polyethylene layers are manufactured according to the same processes as those used to manufacture Appellant's bag. Even two chemical processes that are identical in principle may yield different end products because of variations in the starting materials, temperature, reaction containers, and so on. In fact, this variability of chemicals is one of the reasons why chemicals are typically assigned different grades in commerce. For instance, chemicals with different grades may have different impurities, and thus different physical and/or chemical property. The instant Claim 23 requires that the materials used to construct the bag do not release significant amounts of VOCs. Hemphill does not teach or suggest the requirement that the materials used to construct the bag do not release significant amounts of VOCs.

Even if we assume that the aluminum foil and the polyethylene sheet in the Hemphill bag do not release significant amounts of VOCs, there is no indication that the insulating paper material also does not release significant amounts of VOCs. Taken together, there is no teaching in Hemphill that the materials used to construct the bag do not release significant amounts of VOCs.

Thus, because significant differences exist between Appellant's claimed invention and the disclosure cited by the Examiner, the Examiner must articulate reasoning as to why such differences would have been obvious to one of skill in the art at the time of Appellant's invention.

As explained above, there are many different rationales upon which an obviousness rejection may be based. The Examiner appears to have relied on Rationale (E) or (F) in the rejections. According to the Guidelines, if the Examiner is relying on the rationale that known work in one field of endeavor may prompt variations of it for use in either the same or a different field, he or she must articulate the following after resolving the Graham factual inquiries:

(1) a finding that the scope and content of the prior art, whether in the same field of endeavor as that of the applicant's invention or a different field of endeavor, included a similar or analogous device (method, or product);
(2) a finding that there were design incentives or market forces which would have prompted adaptation of the known device (method, or product);
(3) a finding that the differences between the claimed invention and the prior art were encompassed in known variations or in a principle known in the prior art;
(4) a finding that one of ordinary skill in the art, in view of the identified design incentives or other market forces, could have implemented the claimed variation of the prior art, and the claimed variation would have been predictable to one of ordinary skill in the art; and
(5) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The Guidelines, at 57533. If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim(s) would have been obvious to one of ordinary skill in the art. *Id.*

First, the Hemphill patent relates to the field of grease disposal, and is thus non-analogous art. Appellant recognizes that a reference in a field different from that of applicant's endeavor may be reasonably pertinent if it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his or her invention as a whole. MPEP 2141.01. The Hemphill patent is not such a reference because it relates to a grease disposal bag and would not logically commended itself to the attention of an inventor in chemical engineering. The Examiner has not provided any reasoning as to why a chemical engineer, facing a problem for measuring chemical emission in a chemical plant, would be prompted to look to the field of food waste disposal for a solution.

Second, Appellant recognizes that "[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in

the same field or a different one." *KSR*, at 1740. However, the Examiner has not established that there were design incentives or market forces that would prompt one of skill in the art to attempt to modify the Hemphill bag in a way that is now claimed by Appellant. To support the notion that it would be obvious to eliminate the paper layer, the Examiner has relied on a hypothetical that because the paper layer of the Hemphill bag is for protecting an individual from being burned by the hot grease, the paper layer can be eliminated if one intends to use the bag to store cold grease. Page 4 of the Office Action dated 2/14/08. Such hypothetical, however, is purely speculative and does not establish that at the time of Appellant's invention, "there were design incentives or market forces which would have prompted adaptation of the known device," *i.e.*, the Hemphill bag. *The Guideline*, at 57533, emphasis added. Thus, at least one of the requirements as required by the Guidelines is missing in the Examiner's reasoning.

The Examiner also argued under the "obvious to try" rationale that it would be obvious to remove the paper layer of the Hemphill bag. Page 10 of the Office Action dated 2/14/08. Under the Guidelines, to reject a claim based on this rationale, Office personnel must articulate the following:

> (1) a finding that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem;
>
> (2) a finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem;
>
> (3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success; and
>
> (4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

The Guidelines, at 57532. If any of these findings cannot be made, then this rationale cannot be used to support a conclusion that the claim would have been obvious to one of ordinary skill in the art. *Id.* Appellant respectfully submits that at least the first requirement with respect to the "obvious to try" rationale has not been met. The Examiner has not established that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to modify the Hemphill bag so that it is formed of materials that do not release significant amounts of VOCs.

The Examiner also reasoned that the motivation to remove the outer layer may not and need not be the same as the applicant's need. See lines 21-22, page 10, Office Action dated 2/14/08. Appellant agrees that the motivation to modify a know device in order to arrive at the claimed device need not be the same as Appellant's motivation; however, as explained above, the Examiner has not established that there existed "real" design incentives or other market forces to use materials that do not significant amounts of VOCs, or to remove the outer paper layer of the Hemphill bag at the time of the present invention.

According to the Guidelines and *KSR*, the design incentives or other market forces must be the types that could have prompted one of ordinary skill in the art to vary the prior art in a predictable manner to result in the claimed invention. *The Guidelines*, at 57533. In reversing the lower court's decision, the Supreme Court in *KSR* stated, "[t]he proper question to have asked was whether a pedal designer of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a benefit to upgrading Asano with a sensor." *KSR International Co.*, at 1744. Similarly, in the present case, the proper question should be whether a chemical engineer of ordinary skill in the art, facing the wide range of needs created by developments in the field, would have seen an obvious benefit of using and modifying a grease disposal bag disclosed in Hemphill to develop a system for analyzing VOC emission in a chemical process system.

As explained above, the Hemphill patent is not analogous or reasonably pertinent to the field of the claimed invention and a chemical engineer of ordinary skill in the art would not have turned to a reference in the field of grease disposal in order to solve a problem in a chemical processing plant. Even if a chemical engineer of ordinary skill in the art does decide to improve upon a grease disposal bag in order to solve the problems he or she is facing, the Examiner still fails to provide an incentive which would prompt the chemical engineer to eliminate the outer paper layer of the bag as taught by Hemphill. The only reason provided by the Examiner for the modification is that it may be desirable to use the bag to store cold grease. However, this line of reasoning is flawed because the proper inquiry should be focused on the motivation for a chemical engineer of ordinary skill in the art, but not the motivation for a designer of grease disposal containers. Thus,

the Examiner has not provided a reason that would prompt a chemical engineer of ordinary skill in the art to modify the Hemphill bag in the manner as presently claimed.

Indeed, at the time of the present invention, Appellant was the first one to conceive a bag made of an aluminum layer and a polymer layer for storing a VOC-emitting substance. Appellant was also the first one to conceive placing such a bag at the mean exit temperature of emission of a process system so that the substance inside the bag will soon reach the temperature of the environment. As the Supreme Court warned against in Graham and reiterated in KSR, a fact finder must resist the temptation to read into the prior art the teachings of the invention at issue. Appellant respectfully maintains that the Examiner has not established that a chemical engineer of ordinary skill in the art would be motivated to modify the Hemphill bag in a manner claimed by Appellant without slipping into the use of hindsight.

Moreover, as stated in MPEP 2143.01 and illustrated by *In re* Gordon, if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, there is no suggestion or motivation to make the proposed modification. *In re* Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

In *In re* Gordon, the claimed device was a blood filter assembly for use during medical procedures wherein both the inlet and outlet for the blood were located at the bottom end of the filter assembly, and wherein a gas vent was present at the top of the filter assembly. The prior art reference taught a liquid strainer for removing dirt and water from gasoline and other light oils wherein the inlet and outlet were at the top of the device, and wherein a pet-cock (stopcock) was located at the bottom of the device for periodically removing the collected dirt and water. The reference further taught that the separation is assisted by gravity. The Board concluded the claims were prima facie obvious, reasoning that it would have been obvious to turn the reference device upside down. The court reversed, finding that if the prior art device was turned upside down it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would flow out of the outlet instead of the purified gasoline, and the screen would become clogged.

Similar to the situation described in *In re* Gordon, elimination of the outer paper layer of the Hemphill bag would render the bag unsatisfactory for its intended purpose,

namely, holding hot grease for disposal. Thus, the prior art does not provide any suggestion or motivation to eliminate the outer paper layer without contradicting the teachings of Hemphill.

Lastly, the Examiner reasoned that that elimination of the outer paper layer would have been obvious because the function of the outer layer is no longer desired. *See* page 4 of Office Action dated 2/14/08. This line of reasoning assumes that the function of protecting users from being burned is not desirable in the instant application. This assumption is without basis. Indeed, according to the instant application, samples from a chemical process may possess a high temperature such that burning remains an issue for users handling the samples. *See e.g.*, lines 6-8, page 5 of the Specification, stating that "a typical mean exit (temperature) is from about 5 C to about 100 C." Appellant discovered that the dual layers made of aluminum and polymer happened to be sufficient in protecting users from burning. Under MPEP 2144.04 IIB, omission of an element and retention of its function is an indicia of unobviousness. This provides yet another reason why the present invention is not obvious over Hemphill.

Taken together, significant differences exist between Appellant's claimed invention and the bag disclosed by Hemphill. Because the Examiner has not established why one of skill in the art would find it obvious to modify the Hemphill bag such that all materials used to construct the bag do not release significant amounts of VOCs, the obviousness rejection of Claim 23 can not stand.

Claim 24

Claim 24 is directed to a kit for measuring volatile organic compounds (VOCs) released by a substance produced in a process system having emissions. The kit of Claim 24 comprises a bag and instructions on how to use the bag to measure VOCs released by the substance of interest. Claim 24 also recites that the bag is formed by materials that can be safely stored at the exit temperature of said process system.

The bag disclosed in Hemphill is "formed with a multiply construction and having an internal layer of a heavy gage deformable aluminum foil, an intermediate layer formed by a puncture resistant polyethylene sheet, and an outer layer formed by an insulating paper material." Hemphill, lines 62, Col. 1 to line 1, Col. 2. There is no indication that

the Hemphill bag is formed by materials that can be safely stored at the exit temperature of said process system. Even if we assume that the heavy gage deformable aluminum foil and the polyethylene sheet in the Hemphill bag are safe at the exit temperature of the process system, there is no indication that the Hemphill bag with an outer paper layer can be safely stored at the exit temperature of said process system.

Thus, because significant differences exist between Appellant's claimed invention and the disclosure cited by the Examiner, the Examiner must provide reasoning as to why one of skill in the art would find it obvious to modify the Hemphill bag in such a way so that the bag can be safely stored at the exit temperature of said process system.

First, for reasons similar to those explained above in the discussion of Claim 23, the Hemphill reference is non-analogous art with respect to Appellant's claimed invention.

Second, the Examiner has not provided any reasoning as to why one of skill would find it desirable to build such a bag that can be safely stored at the exit temperature of said process system. Indeed, the only reasoning provided by the Examiner is one conclusory statement that "[t]he bag of Hemphill, with or without the paper layer, is also formed of aluminum and polyethylene and, therefore, will also be formed of materials that can be safely stored at the exit temperature of a process system." Lines 10-13, page 5, Office Action dated 2/14/08. This statement, however, does not establish why the Hemphill bag, with its outer layer being made of paper, is safe to be stored at the exit temperature of the process system as Appellant has taught and now claimed.

The Examiner argued that there is "no mention of what temperature ranges are to be within the range of a (sic) 'exit temperature of the process system.'" Lines 18-20, page 10, Office Action dated 2/14/08. Appellant respectfully disagrees. According to the instant application, "a typical mean exit (temperature) is from about 5 C to about 100 C." *See e.g.*, lines 6-8, page 5 of the Specification.

The Examiner further reasoned that the motivation to remove the outer layer may not and need not be the same as the applicant's need. See lines 21-22, page 10, Office Action dated 2/14/08. Appellant agrees that the motivation to modify a know device in order to arrive at the claimed device need not be the same as Appellant's motivation; however, as explained above, the Examiner has not established that there existed a "real"

motivation to use a bag that can be safely stored at the exit temperature of the process system, or to remove the outer paper layer of the Hemphill bag at the time of the present invention.

Taken together, because the Examiner has not established why one of skill in the art would be motivated to modify the Hemphill bag so that it can be safely stored at the exit temperature of the process system, the obviousness rejection of Claim 24 can not stand.

Claim 25

Claim 25 is directed to a kit for measuring volatile organic compounds (VOCs) released by a substance produced in a process system having emissions. The kit of Claim 25 comprises a bag and instructions on how to use the bag to measure VOCs released by the substance of interest. Claim 25 also recites that the bag has a wall consisting of two layers, with the inside layer being vapor impermeable and the outside layer being made of polymer. The term "consisting of" in Claim 25 defines the scope of the claim as a kit comprising a bag that has two and only two layers.

By contrast, the bag disclosed in Hemphill is "formed with a multiply construction and having an internal layer of a heavy gage deformable aluminum foil, an intermediate layer formed by a puncture resistant polyethylene sheet, and an outer layer formed by an insulating paper material." Hemphill, lines 62, Col. 1 to line 1, Col. 2. Thus, the Hemphill bag has at least three layers, which is different from Appellant's claimed bag with two layers. Also, Claim 25 recites that the outside layer is made of polymer, while the outside layer of the Hemphill bag is made of paper.

Because significant differences exist between Appellant's claimed invention and the disclosure cited by the Examiner, the Examiner must provide reasoning as to why one of skill in the art would find it obvious to modify the Hemphill bag by removing the outer paper layer.

The reasoning presented above under the heading "Claim 23" also applies for Claim 25 and is hereby incorporated by reference. Because the Examiner has not established that it would be obvious to one of skill in the art to eliminate the outer paper layer of the Hemphill bag, withdrawal of the rejections over Hemphill is respectfully requested.

Claim 32

Claim 32 is directed to a kit for measuring volatile organic compounds (VOCs) released by a substance produced in a process system having emissions. The kit of Claim 32 comprises a bag and instructions on how to use the bag to measure VOCs released by the substance of interest. Claim 32 also recites that the bag has a wall consisting of an inner liner and an outer liner, wherein said inner liner and an outer liner do not release significant amounts of VOCs. The term "consisting of" in Claim 32 defines the scope of the claim as a kit comprising a bag that has two and only two layers.

By contrast, the bag disclosed in Hemphill is "formed with a multiply construction and having an internal layer of a heavy gage deformable aluminum foil, an intermediate layer formed by a puncture resistant polyethylene sheet, and an outer layer formed by an insulating paper material." Hemphill, lines 62, Col. 1 to line 1, Col. 2. Thus, the Hemphill bag has at least three layers, which is different from Appellant's claimed bag with two layers. Also, Claim 32 recites that the inner liner and outer liner do not release significant amounts of VOCs. Hemphill does not teach or suggest this limitation.

Similar to reasons presented in the previous section with respect to Claim 25, significant differences exist between Appellant's invention defined in Claim 32 and the bag disclosed in Hemphill. The reasoning presented above under the heading "Claim 23" also applies for Claim 32 and is hereby incorporated by reference. Because the Examiner has not established why one of skill in the art would find it obvious to modify the Hemphill bag such that all materials used to construct the bag do not release significant amounts of VOCs, the obviousness rejection of Claim 32 can not stand.

The following commentary is provided with respect to the individual claims:

Claim 23

Claim 23 recites a kit for measuring volatile organic compounds.

23. A kit for measuring the volatile organic compounds of a substance, said kit comprising:

(a) an enclosed collapsible bag having a sealable opening to allow an amount of said substance to be placed in said enclosed bag such that there is

headspace above said substance, said bag being formed by materials that do not release significant amounts of volatile organic compounds (VOCs); and

(b) instructions for analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said substance.

In regard to Claim 23, the Hemphill reference does not teach or suggest that the bag is formed by materials that do not release significant amounts of volatile organic compounds (VOCs) and the inclusion of instructions in the kit.

Claims 26 and 29 depend from Claim 23 and benefit from like arguments as provided hereinabove. However, these Claims have additional features that patentably distinguish them over the reference:

Claim 26

Claim 26 depends from Claim 23 and recites that the instructions for analyzing said samples include withdrawing said samples from said headspace using a flame ionization detector. The Hemphill reference does not disclose or suggest the instructions including a step of withdrawing said samples from said headspace using a flame ionization detector.

Claim 29

Claim 29 depends from Claim 23, and recites that the instructions for analyzing samples include storing said enclosed bag in a temperature adjustable apparatus. The cited reference does not teach or suggest this limitation of Claim 29.

Claim 24 recites a kit for measuring volatile organic compounds.

24. A kit for measuring the volatile organic compounds of a substance produced in a process system having emissions, said kit comprising:

(a) an enclosed collapsible bag having a sealable opening to allow an amount of said substance to be placed in said enclosed bag such that there is headspace above said substance, said bag being formed by materials that can be safely stored at the exit temperature of said process system; and

(b) instructions for placing said enclosed bag at the exit temperature of said process system until an equilibrium has been reached between the substance and the headspace and analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said substance.

In regard to Claim 24, the Hemphill reference does not teach or suggest that the bag is formed by materials that can be safely stored at the exit temperature of said process system and the inclusion of instructions in the kit.

Claims 27 and 30 depend from Claim 24 and benefit from like arguments as provided hereinabove. However, these Claims have additional features that patentably distinguish them over the reference:

Claim 27

Claim 27 depends from Claim 24 and recites that the instructions for analyzing said samples include withdrawing said samples from said headspace using a flame ionization detector. The Hemphill reference does not disclose or suggest the instructions including a step of withdrawing said samples from said headspace using a flame ionization detector.

Claim 30

Claim 30 depends from Claim 24, and recites that the instructions for analyzing samples include storing said enclosed bag in a temperature adjustable apparatus. The cited reference does not teach or suggest this limitation of Claim 30.

Claim 25 recites a kit for measuring volatile organic compounds.

25. A kit for measuring the volatile organic compounds of a substance, said kit comprising:

(a) an enclosed collapsible bag having a sealable opening to allow an amount of said substance to be placed in said enclosed bag such that there is headspace above said substance, said bag having a wall consisting of two layers, wherein the inside layer is vapor impermeable and the outside layer is made of polymer; and

(b) instructions for analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said material.

In regard to Claim 25, the Hemphill reference does not teach or suggest that the bag has a wall consisting of two layers, wherein the inside layer is vapor impermeable and the outside layer is made of polymer and the inclusion of instructions in the kit.

Claims 28 and 31 depend from Claim 25 and benefit from like arguments as provided hereinabove. However, these Claims have additional features that patentably distinguish them over the reference:

Claim 28

Claim 28 depends from Claim 25 and recites that the instructions for analyzing said samples include withdrawing said samples from said headspace using a flame ionization detector. The Hemphill reference does not disclose or suggest the instructions including a step of withdrawing said samples from said headspace using a flame ionization detector.

Claim 31

Claim 31 depends from Claim 25, and recites that the instructions for analyzing samples include storing said enclosed bag in a temperature adjustable apparatus. The cited reference does not teach or suggest this limitation of Claim 31.

Claim 32 recites a kit for measuring volatile organic compounds.

32. A kit for measuring the volatile organic compounds of a material in a process system having emissions, said kit comprising:

(a) an enclosed collapsible bag having a wall consisting of an inner liner and an outer liner, wherein said inner liner and outer liner do not release significant amounts of volatile organic compounds (VOCs), said bag having a sealable opening to allow an amount of said material to be placed in said enclosed bag within said inner liner such that there is headspace above said material; and

(b) instructions for analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said material.

In regard to Claim 32, the Hemphill reference does not teach or suggest that the bag has a wall consisting of an inner liner and an outer liner, wherein said inner liner and outer liner do not release significant amounts of volatile organic compounds (VOCs) and the inclusion of instructions in the kit.

Claims 33 and 34 depend from Claim 32 and benefit from like arguments as provided hereinabove. However, these Claims have additional features that patentably distinguish them over the reference:

Claim 33

Claim 33 depends from Claim 32 and recites that the inner liner is aluminum foil.

Claim 34

Claim 34 depends from Claim 32, and recites that the outer liner is a polymeric material. The cited reference discloses that the outer liner is paper and does not teach or suggest this limitation of Claim 34.

(8) Claims appendix.

A copy of Claims 23-34 involved in this appeal is enclosed as an appendix hereto.

(9) Evidence appendix.

Not applicable.

(10) Related proceedings appendix.

Not applicable.

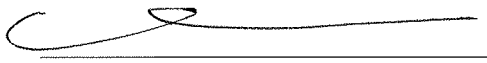
CONCLUSION

Appellant respectfully requests the Honorable Board of Appeals reverse the Examiner in the rejections of Claims 23-34 under 35 U.S.C. § 103(a). Appellant respectfully solicits allowance of Claims 23-34, all of the Claims appealed and pending in the instant application.

Other than the costs for this appeal brief, no further fees are deemed due in connection with this matter. However, the Commissioner is hereby authorized to charge any fees which may be due in this matter from Deposit Account Number 12-0600.

Respectfully submitted,

LATHROP & GAGE L.C.



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Claims Appendix

1-22. (Cancelled)

23. A kit for measuring the volatile organic compounds of a substance, said kit comprising:

(a) an enclosed collapsible bag having a sealable opening to allow an amount of said substance to be placed in said enclosed bag such that there is headspace above said substance, said bag being formed by materials that do not release significant amounts of volatile organic compounds (VOCs); and

(b) instructions for analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said substance.

24. A kit for measuring the volatile organic compounds of a substance produced in a process system having emissions, said kit comprising:

(a) an enclosed collapsible bag having a sealable opening to allow an amount of said substance to be placed in said enclosed bag such that there is headspace above said substance, said bag being formed by materials that can be safely stored at the exit temperature of said process system; and

(b) instructions for placing said enclosed bag at the exit temperature of said process system until an equilibrium has been reached between the substance and the headspace and analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said substance.

25. A kit for measuring the volatile organic compounds of a substance, said kit comprising:

(a) an enclosed collapsible bag having a sealable opening to allow an amount of said substance to be placed in said enclosed bag such that there is headspace above said substance, said bag having a wall consisting of two

layers, wherein the inside layer is vapor impermeable and the outside layer is made of polymer; and

(b) instructions for analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said material.

26. The kit of claim 23 wherein said instructions for analyzing said samples include withdrawing said samples from said headspace using a flame ionization detector.

27. The kit of claim 24 wherein said instructions for analyzing said samples include withdrawing said samples from said headspace using a flame ionization detector.

28. The kit of claim 25 wherein said instructions for analyzing said samples include withdrawing said samples from said headspace using a flame ionization detector.

29. The kit of claim 23 wherein said instructions for analyzing samples include storing said enclosed bag in a temperature adjustable apparatus.

30. The kit of claim 24 wherein said instructions for analyzing samples include storing said enclosed bag in a temperature adjustable apparatus.

31. The kit of claim 25 wherein said instructions for analyzing samples include storing said enclosed bag in a temperature adjustable apparatus.

32. A kit for measuring the volatile organic compounds of a material in a process system having emissions, said kit comprising:

(a) an enclosed collapsible bag having a wall consisting of an inner liner and an outer liner, wherein said inner liner and outer liner do not release significant amounts of volatile organic compounds (VOCs), said bag having a sealable opening to allow an amount of said material to be placed in said enclosed bag within said inner liner such that there is headspace above said material; and

(b) instructions for analyzing samples from said headspace in said enclosed bag, thereby providing said volatile organic compounds of said material.

33. The kit of claim 32 wherein said inner liner is aluminum foil.

34. The kit of claim 32 wherein said outer liner is a polymeric material.

35-36 (Cancelled).

Evidence appendix

Not applicable.

Related Proceedings Appendix

Not applicable.